Supply Chain Planning Strategy Framework

Overview

A Supply Chain Planning Strategy Framework provides a structured approach to aligning demand, supply, inventory, and distribution processes to achieve operational excellence and business growth.
It integrates forecasting, resource planning, and logistics into a unified system that enhances efficiency, reduces cost, and improves service levels.

Framework Pillars

- Demand Planning
- Supply Planning
- Inventory Optimisation
- Production Planning
- Distribution Planning

Strategic Alignment

The framework connects:

- Business goals
- Operational capabilities
- Market demand

Ensuring synchronized decision-making across all supply chain functions

Key Objectives

- Improve forecast accuracy and demand visibility
- Optimise inventory levels across the supply chain
- Enhance customer satisfaction and service levels
- Reduce operational and logistics costs
- Enable agility and resilience in disruptions

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Demand Planning

Demand planning focuses on predicting future customer demand using data, analytics, and collaboration.

KEY TECHNIQUES

- Statistical forecasting models
- AI/ML-driven demand predictions
- Demand sensing using real-time data
- Collaborative planning with sales & marketing

BENEFITS

- Reduced forecast errors
- Improved product availability
- Better production scheduling

Supply Planning

Supply planning ensures that resources, production, and procurement align with forecasted demand.

CORE ACTIVITIES

- Capacity planning
- Supplier coordination
- Procurement optimisation
- Production scheduling

STRATEGIC FOCUS

- Balance cost vs service levels
- Minimise supply risks
- Ensure resource utilisation efficiency

Demand → Forecast → Supply Plan → Production → Delivery

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Inventory Optimisation

Maintain optimal inventory to avoid stockouts and excess holding costs

KEY METHODS

- Safety stock calculation
- Economic Order Quantity (EOQ)
- ABC inventory classification
- Multi-echelon inventory optimization

OUTCOMES

- Reduced working capital
- Improved service levels
- Efficient stock allocation

Distribution Planning

Focuses on efficient movement of goods from production to end customers.

KEY COMPONENTS

- Network design optimization
- Warehouse location planning
- Transportation management
- Last-mile delivery strategies

BEST PRACTICES

- Use route optimization tools
- Implement warehouse automation
- Enable real-time shipment tracking

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Technology, KPIs & Continuous Improvement

Digital Enablers

Modern supply chains rely heavily on technology:

- ERP Systems – integrated planning and execution
- Advanced Planning Systems (APS)
- AI/ML Analytics – predictive and prescriptive insights
- IoT Sensors – real-time tracking and monitoring
- Cloud Platforms – collaboration and scalability

Key Performance Indicators (KPIs)

Operational KPIs

- Forecast accuracy
- Inventory turnover ratio
- Order fulfilment rate

Service KPIs

- On-time delivery (OTD)
- Customer satisfaction level

Financial KPIs

- Supply chain cost
- Cash-to-cash cycle time

Continuous Improvement Framework

Approaches

- Lean supply chain practices
- Six Sigma methodologies
- Process automation
- Digital transformation initiatives

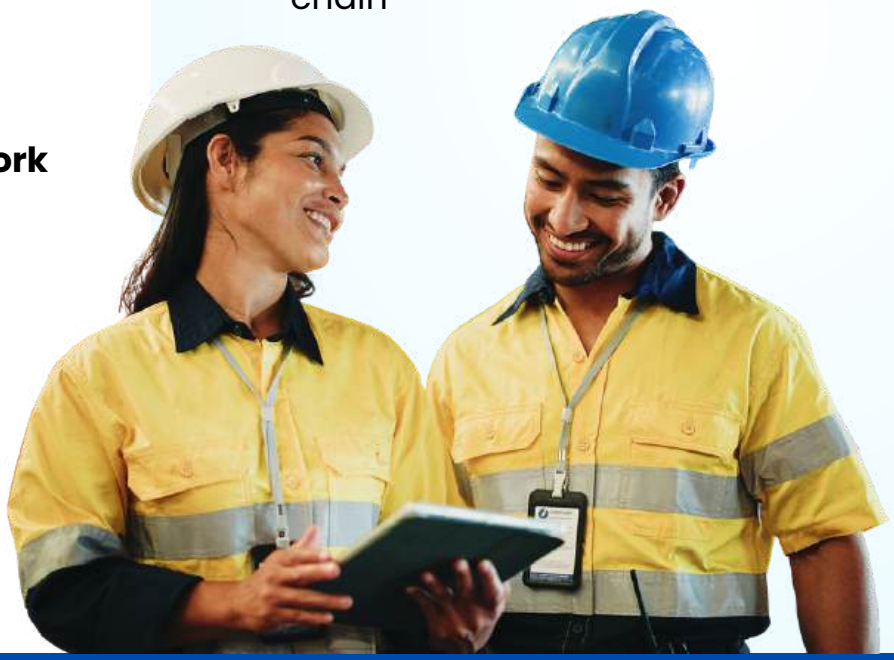
Risk & Resilience Planning

- Scenario analysis
- Supplier diversification
- Safety stock strategies
- Crisis response planning

Conclusion

A well-defined Supply Chain Planning Strategy Framework enables organisations to:

- Respond quickly to market changes
- Optimize operations end-to-end
- Build a resilient and future-ready supply chain



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